This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A deposit monitoring apparatus located above ground level comprising:

an acoustic device adapted to operate in a longitudinal mode and in a resonance mode in a frequency range of 10 kHz to 250 kHz, the device including a monitoring surface directly exposed to fluids prone to causing deposition of material, wherein the deposition of the material on the monitoring surface is monitored by measuring a change in resonance frequency of the acoustic device; and

a power supply adapted to supply said monitor with electrical energy.

2. (cancelled).

3. (currently amended) The apparatus of claim ~~2~~1, wherein the acoustic device further comprises a transducer, and a focussing element coupled to the transducer.

4. (original) The apparatus of claim 3, wherein the focussing element is an acoustic horn.

5. (original) The apparatus of claim 1, wherein the resonance frequency of the acoustic device is in the range of 10 kHz to 150 kHz.

6. (original) The apparatus of claim 5 wherein the resonance frequency of the acoustic device is in the range of 50 kHz to 100 kHz.

7. (original) The apparatus of claim 1 wherein the fluids are primarily fluids produced by a hydrocarbon wellbore.

8. (original) The apparatus of claim 1, wherein the monitoring surface is located on or near one of the following devices switches, valves, sleeves, mandrels, risers, subsea pipelines, surface separators and sensors located on surface facilities.

9. (original) The apparatus of claim 1 further comprising a deposit removal system adapted to at least partially remove the deposition from the monitoring surface, the deposit removal system being in a control loop with said deposit monitor.

10. (original) The apparatus of claim 9, wherein the deposit removal system includes a deposition inhibiting or removing chemical agent.

A1 (cont'd)

11. (original) The apparatus of claim 9, wherein the deposit removal system uses the acoustic device to exert a physical force onto the deposited material.

12. (original) The apparatus of claim 9, wherein the deposition removal system is near a sensor having a surface exposed to the fluids and the deposition removal system is adapted to remove deposits from said exposed surface.

13. (original) The apparatus of claim 12, wherein the sensor is selected from a group comprising optical sensors, electro-chemical sensors, or acoustic sensors.

14. (currently amended) The apparatus of claim ~~11~~12, wherein the exposed sensor surface is selected from a group comprising optical windows, membranes, or sensitive areas of acoustic sensors.

15. (original) The sensor of claim 1, wherein the sensor includes an additional sensing system to analyze material deposited on the monitoring surface.

16. (currently amended) A ~~deposit~~ monitoring apparatus located above ground level comprising:

a ~~deposit~~ monitor adapted to measure ~~deposition of material on~~characteristics of fluids the monitor having a monitoring surface that is directly exposed to the fluids ~~prone to causing deposition of material~~;

~~a power supply adapted to supply said monitor with electrical energy; and~~

a deposit removal system ~~in communication with the deposit monitor adapted~~including an acoustic device adapted to exert a physical force on the monitoring surface to at least partially remove the deposition from the monitoring surface, the deposit removal system being in a control loop with said deposit monitor; and

a power supply adapted to supply said monitor with electrical energy.

A' (cont'd)

17. (original) The apparatus of claim 16 wherein the fluids are primarily fluids produced by a hydrocarbon wellbore. cl. 7

18. (original) The apparatus of claim 16, wherein the monitoring surface is located on or near one of the following devices switches, valves, sleeves, mandrels, risers, subsea pipelines, surface separators and sensors located on surface facilities. cl. 8

19. (currently amended) The apparatus of claim 16 wherein the ~~deposit~~ monitor further ~~comprises an~~ uses said acoustic device, said acoustic device being adapted to operate in a resonance mode, and wherein the ~~deposit~~ monitor measures deposition of the material on the monitoring surface by measuring a change in resonance frequency of the acoustic device.

20. (original) The apparatus of claim 19, wherein the acoustic device operates in a longitudinal mode.

21. (original) The apparatus of claim 19, wherein the acoustic device further comprises a transducer, and a focussing element coupled to the transducer. cl. 13

22. (original) The apparatus of claim 19, wherein the resonance frequency of the acoustic device is in the range of 10 kHz to 150 kHz. cl. 15

23. (original) The apparatus of claim 19, wherein the deposit removal system includes a deposition inhibiting or removing chemical agent. cl. 16

24. (cancelled).

25. (cancelled).

26. (currently amended) The apparatus of claim ~~25~~16, wherein the ~~sensor~~ monitor is selected from a group comprising optical sensors, electro-chemical sensors, or acoustic sensors. cl. 13

27. (new) The apparatus of claim 16 wherein the monitor is a gamma ray density measurement system.

28. (new) The apparatus of claim 27 wherein the monitoring surface is a nuclear window.

29. (new) The apparatus of claim 16 wherein the monitor is an optical fluid analyzer.

30. (new) The apparatus of claim 29 wherein the monitoring surface includes and optical window.

31. (new) The apparatus of claim 16 wherein the monitor is used to measure activity of an ionic species contained in the wellbore fluid.

32. (new) The apparatus of claim 31 wherein the monitoring surface is a membrane of an ion selective electrode.

33. (new) The apparatus of claim 16 wherein the monitoring surface is a separation membrane.

34. (new) A deposit monitoring apparatus located above ground level comprising:

an acoustic device adapted to operate in a resonance mode including a monitoring surface directly exposed to fluids produced by a hydrocarbon wellbore, wherein the deposition of material on the monitoring surface is monitored by

measuring a change in resonance frequency of the acoustic device, and wherein by measuring said change in resonance frequency of the acoustic device a thickness of deposited material of 600 microns can be distinguished from a thickness of deposited material of 1050 microns; and

a power supply adapted to supply said monitor with electrical energy.

35. (new) The apparatus of claim 34, wherein the acoustic device operates in a longitudinal mode.

A1 (cont'd)

36. (new) The apparatus of claim 35, wherein the acoustic device further comprises a transducer, and an acoustic horn coupled to the transducer.

37. (new) The apparatus of claim 34, wherein the resonance frequency of the acoustic device is in the range of 10 kHz to 150 kHz. Cl 5

38. (new) The apparatus of claim 34, wherein the monitoring surface is located on or near one of the following devices: switches, valves, sleeves, mandrels, risers, subsea pipelines, surface separators and sensors located on surface facilities. Cl. 8

39. (new) The apparatus of claim 34, further comprising a deposit removal system adapted to at least partially remove the deposition from the monitoring surface using the acoustic device to exert a physical force onto the deposited material, the deposit removal system being in a control loop with said deposit monitor.

40. (new) The apparatus of claim 39, wherein the deposition removal system is near a sensor having a surface exposed to the fluids and the deposition removal system is adapted to remove deposits from said exposed surface.